

REMARKS

Claims 1-19 are pending in this application. By this Amendment, independent claims 1 and 19 are amended.

Claims 1 and 19 are amended to recite that the template "is provided with through holes that communicate, respectively, with one end and the other end of the concave portion and which are, respectively, an inlet and an outlet for filling or exchanging a core forming curable resin of the concave portion". Support can be found, for example, in through holes 26 and 28 (Figs. 4A-4B) and at page 31, line 14 to page 34, line 22 of the specification as filed. Claims 1 and 19 also are amended to recite that "the cladding film substrate into close contact with the template without using an adhesive". Support can be found, for example, at page 28, lines 2-8; page 29, lines 10-11; and in Figs. 1D and 2 of the specification as filed. Claims 1 and 19 also are amended to recite that the core forming curable resin is filled into the concave portion of the template by applying suction from the through hole that is the outlet of the concave portion. Support can be found, for example, at page 30, line 23 to page 31, line 9 of the specification as filed. No new matter is added.

I. The Claims Are Patentable Over The Applied References

A. Rejection under 35 U.S.C. 103(a)

Claims 1-19 are rejected under 35 U.S.C. 103(a) over U.S. Patent No. 6,355,198 to Kim et al. (Kim) in view of Japanese Patent Publication No. 2002-365429 to Saiki et al. (Saiki). Applicants respectfully traverse the rejection.

Regarding independent claims 1 and 19, the applied references fail to disclose or render obvious (1) "preparing a template that is made of a template forming curable resin and has a concave portion corresponding to an optical waveguide core convex portion, and that is provided with through holes that communicate, respectively, with one end and the other end of the concave portion and which are, respectively, an inlet and an outlet for filling or

exchanging a core forming curable resin of the concave portion" (emphasis added); (2) "bringing the cladding film substrate into close contact with the template without using an adhesive" (emphasis added); and (3) "filling in a core forming curable resin into the concave portion of the template by applying suction from the through hole that is the outlet of the concave portion" (emphasis added).

Kim discloses, in one embodiment, a micro-molding method (Fig. 1) and, in another embodiment, a method in which the fluid precursor 36 is put on the applicator 20 before transfer to substrate 30 (Fig. 15). However, the description concerning the micro-molding method clearly applies to Fig. 1 and not to Fig. 15, which is related to a transfer method. Thus, Kim Fig. 15 does not disclose an optical waveguide made by a micro-molding method.

Because the optical waveguide has a very microscopic structure, one of ordinary skill in the art would have known that, while Kim discloses a micro-molding method in Fig. 1, it would take a very long time to produce a waveguide by Kim's method and the ability to achieve a realizable length of the waveguide would be limited.

Regarding features (1) and (3) quoted above that the template has through holes and that suction is applied thorough the outlet through hole, Kim is silent as to the use of any through holes or suction to fill the channels 32. Further, while Kim discloses use of capillary micromolding, the waveguide would have a very microscopic structure, and thus, it would take a very long time to produce the waveguide and the realizable length of the waveguide would be limited.

In the claims, the micromolding is achieved by features (1) and (3) of the thorough holes and the use of suction through the outlet through hole (see page 25, lines 21-25 of the specification as filed). Thus, the claimed subject matter has improved speed of manufacture and is able to produce longer lengths.

Regarding feature (2) quoted above of not using an adhesive, the Office Action cites to Saiki's ultraviolet treatment carried out to make the protective film more hydrophilic. This treatment is carried out because a water-based adhesive is used in Saiki with respect to the protective film. Because a water-based adhesive is used, it is beneficial to increase hydrophilicity.

In contrast, the claims do not recite a water-based adhesive or the like. It is not necessary to use a water-based adhesive or the like because, in embodiments peeling is required. Further, the template itself, in embodiments, is made of a material having high adhesiveness (page 13, line 22 to page 14, line 2 of the specification as filed). Thus, in the claimed subject matter, the cladding film and the template are placed directly in close contact with each other. Therefore, the present application is not at all related to Saiki in which ozone treatment is provided in order to improve affinity with a water-based adhesive.

For the foregoing reasons, Applicants request withdrawal of the rejection.

B. Rejections Under The Doctrine Of Obviousness-Type Double Patenting

The Office Action:

(1) rejects claims 1-19 under the doctrine of obviousness-type double patenting over claims 1-18 of U.S. Patent No. 6,901,198 to Shimizu et al. (Shimizu '198) in view of Saiki;

(2) provisionally rejected claims 1-19 under the doctrine of obviousness-type double patenting over claims 9 and 10 of copending Application No. 11/005,077 to Shimizu et al. (Shimizu '077) in view of Saiki (This rejection has matured because Shimizu '077 has issued as U.S. Patent No. 7,174,057 (Shimizu '057));

(3) provisionally rejected claims 1-19 under the doctrine of obviousness-type double patenting over claims 1-20 of copending Application No. 10/930,816 to Ohtsu et al.

(Ohtsu '816) in view of Saiki (This rejection has matured because Ohtsu '816 has issued as U.S. Patent No. 7,317,861 (Ohtsu '861));

(4) provisionally rejected claims 1-19 under the doctrine of obviousness-type double patenting over claims 1-20 and 23-25 of copending Application No. 10/390,685 to Akutsu et al. (Akutsu '685) in view of Saiki (This rejection has matured because Akutsu '685 has issued as U.S. Patent No. 7,294,292 (Akutsu '292));

(5) provisionally rejects claims 1-19 under the doctrine of obviousness-type double patenting over claims 1-17 of copending Application No. 10/936,639 to Shimizu et al. (Shimizu '639) in view of Saiki; and

(6) provisionally rejects claims 1-19 under the doctrine of obviousness-type double patenting over claims 1-23 of copending Application No. 10/801,803 to Akutsu et al (Akutsu '803) in view of Saiki.

The attached Terminal Disclaimer renders the rejections moot. Applicants request withdrawal of the rejections.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Jonathan H. Backenstose
Registration No. 47,399

JAO:JHB/wkb

Attachment:

Request for Continued Examination
Terminal Disclaimer

Date: July 28, 2008

OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
